

10/022,109

REMARKS

Upon receipt of this response, the Examiner is respectfully requested to contact the undersigned representative of the Applicant to arrange a telephone interview concerning the inventive merits of this application.

The Applicant acknowledges that the restriction requirement, under 35 U.S.C. § 121, between the following claimed inventions

- I. Claims 1-9 drawn to a method of preventing the delamination of multiple layers of at least one polymer container, classified in class 264, subclass 162;
or
- II. Claims 10-11 drawn to a multi-layered container, classified in class 215, subclass 379.

As required by the Examiner, the Applicant hereby affirms the telephone election of claims 1-9 and notes that claims 10-11 are withdrawn from further consideration by the Examiner as being drawn to a non-elective invention. Accordingly, the Applicant contemplates canceling claims 10-11 from this application once this application is otherwise in condition for allowance.

On pages 3-7, the Examiner raises a variety of obviousness-type double-patenting rejections on pending claims 1-9 in view of United States Patent No. 6,062,408; 6,126,886 and 6,237,791. The Applicant acknowledges and respectfully traverses each one of the raised obviousness-type double-patenting rejections in view of the following as well as the attached.

With respect to the numerous double obviousness type patenting rejections raised in view of United States Patent Nos. 6,062,408, 6,126,886 and 6,237,791, the Applicant acknowledges and respectfully traverses all of the raised obviousness-type patenting rejection in view of the attached three (3) Terminal Disclaimers, one for each one of the cited patents, along with the associated terminal disclaimer fees for each one of the three Disclaimers. The submission of these terminal disclaimers is believed to overcome all of the raised obviousness-type double patenting rejections in view of these three (3) United States patents.

Next, claims 1-9 are objected to and claim 9 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the reasons noted in the official action. The rejected claims are accordingly amended, by the above claim amendments, and the presently pending claims are now believed to particularly point out and distinctly claim the subject matter regarded as the invention, thereby overcoming all of the raised § 112, second paragraph, rejections. The entered claim amendments are directed solely at overcoming the raised indefiniteness rejection(s) and are not directed at distinguishing the present invention from the art of record in this case.

Lastly, claims 1-5 and 7 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Thompson `615 in view of Japanese Publication No 03-085177A ("Japanese `177"); while claims 1-5 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Thompson `667 and Japanese `177; and claims 6, 8 and 9 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over Thompson `667, Japanese `177 and Koyama et al. `753. The Applicant acknowledges and respectfully traverses all of the raised obviousness rejections in view of the following remarks.

Turning now to Thompson `615, this reference relates to an arrangement for connecting a lip 19 defining an opening 22 of a body 12 with a lip 40 of a concave lid 34. As shown in Figs 2-4 of that reference, the can end 32 is joined to the can body 12 in a sealing engagement which is created by tightly curling the juxtaposed free ends 18, 38 of the can end and the body into a double walled curled and coiled portion. Figs. 5 and 6A show the respective can ends 32 and the can body 12 prior to assembling and joining wherein the free ends 18, 38 are tapered to facilitate curling thereof, see column 6, lines 27-41 of Thompson `615.

Thompson `667 relates to an arrangement in which an upper free end 25 of a container neck 10 is curled by engagement with a curling tube which may be heated to a temperature of about 300°F to curl the free end, either inwardly or outwardly, to form a curled free end 24 (see Figs. 6 and 12, for example). However, as is shown in each one of the drawings, the curled free end has a much thinner wall thickness than the remainder of the neck portion

and is not formed from multiple layers which may delaminate from one another, as with the presently claimed invention. Moreover, the curling process is for an entirely different purpose, that is, the curling is for providing a rounded opening having a smooth rim and not for the purpose of preventing the delamination of two or more layer of material from one another, as with the presently claimed invention.

As indicated in the pending specification, the presently claimed method is directed at preventing delamination of multi-layered plastic containers to prevent the one or more layers from delaminating from one another. According to the present invention, the container may be blow molded from a preform having at least one barrier layer possibly extending only a portion of the height of the preform to form an intermediate article which is then trimmed to at least expose the at least one barrier layer at the perimeter edge of the opening. Alternatively, the barrier layer may extend throughout the preform and the blow mold container is formed directly from the preform. The present invention is directed at preventing delamination of the inner and outer layers 3 from, for example, a centrally located barrier layer 2 typically following trimming procedure.

As the Examiner appreciated, neither one of the Thompson '615 or Thompson '667 base references in any way relates to a multilayer container, e.g., a container having a barrier layer and at least one other layer such as an outer or an inner plastic layer. Moreover, neither one of the base references appears to be particularly concerned with preventing delamination of two layers from one another, let alone preventing the barrier layer from delaminating from at least one plastic layer. Further, neither one of the base references appears to be in any way concerned with preventing delamination of the at least one plastic layer from the barrier layer following trimming of the perimeter portion of the container, as presently recited.

It is important to note that during the trimming step, the multiple layers, e.g., the barrier layer 2 and the outer and inner plastic layers 3, have a tendency to become at least partially delaminated from one another about the perimeter opening of the container. The inventors have discover that by heating the perimeter of the container, until the perimeter becomes

10/022,109

sufficiently softened and workable and then using a curling device to curl the perimeter, it is possible to maintain the multiple layers in contact with one another and form a curled perimeter which inhibits delamination of the multiple layers from one another.

With respect to the remaining applied art, the Applicant acknowledges that the additional references of Japanese `177 and Koyama et al. `753 may arguable related to the features indicated by the Examiner in the official action. Nevertheless, the Applicant respectfully submits that the combination of the base reference of Thompson `667 with this additional art still fails to in any way teach, suggest or disclose the above distinguishing features of the presently claimed invention. As such, all of the raised rejections should be withdrawn at this time in view of the above amendments and remarks.

In order to emphasize the above noted distinctions between the presently claimed invention and the applied art, the independent claim 1 of this application now recites the features of

providing an intermediate article having an opening; trimming a waste portion of a perimeter of the intermediate article to form a polymer container having a perimeter at which the multiple layers are at least partially exposed.....using said device to curl said perimeter sufficiently to maintain said multiple layers intact and inhibit delamination of the multiple layers from one another. (Emphasis added)

Independent claims 16 and 22 of this application now recite the features of

a) forming, by a blow molding process, the polymer container having at least one plastic layer and a barrier layer; b) trimming a waste portion of a perimeter of the polymer container to define the opening of the polymer container whereby the at least one plastic layer and the barrier layer are both at least partially exposed by the trimming step and at least a portion of the perimeter of the polymer container is partially delaminated..... d) sufficiently curling the perimeter of the polymer container so that the sufficiently soften perimeter forms a curled perimeter without delamination of the at least one plastic layer and the barrier layer from one another and the sufficiently curled perimeter imparts sufficient

resistance to delamination of the at least one plastic layer and the barrier layer from one another. (Emphasis added.)

Independent claim 22 of this application further recites the features of

a) forming, by a blow molding process, an intermediate article having at least one plastic layer and a barrier layer; b) trimming a waste portion of a perimeter of the intermediate article to form the polymer container and define the opening of the polymer container whereby the at least one plastic layer and the barrier layer are both at least partially exposed by the trimming step and at least a portion of the perimeter of the polymer container is partially delaminated; c) heating the perimeter of the polymer container until the perimeter is sufficiently soften so that separation between the barrier layer and the at least one plastic layer, due to stiffness and lack of adhesion, is delayed.....e) sufficiently curling the perimeter of the polymer container about an angle of at least about 180° so that the sufficiently soften perimeter forms a curled perimeter without delamination of the at least one plastic layer and the barrier layer from one another and the sufficiently curled perimeter imparts sufficient resistance to delamination of the at least one plastic layer and the barrier layer from one another.

Such features are believed to clearly and patentably distinguish the presently claimed invention from all of the art of record, including the applied art.

If any further amendment to this application is believed necessary to advance prosecution and place this case in allowable form, the Examiner is courteously solicited to contact the undersigned representative of the Applicant to discuss the same.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised rejection(s) should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejection(s) or applicability of the Thompson '615, Thompson '667, Japanese '177 and/or Koyama et al. '753 references, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the

10/022,109

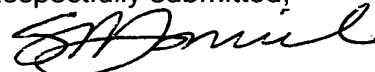
applied references, the raised rejection should be withdrawn at this time. Alternatively, if the Examiner is relying on his/her expertise in this field, the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,



Scott A. Daniels, Reg. No. 42,462

Customer No. 020210

Davis & Bujold, P.L.L.C.

Fourth Floor

500 North Commercial Street

Manchester NH 03101-1151

Telephone 603-624-9220

Facsimile 603-624-9229

E-mail: patent@davisandbujold.com

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service, with sufficient postage, as First Class Mail in an envelope addressed to: Director of the United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 April 30, 2004.

By: _____



Print Name: Scott A. Daniels